

STATUS OF THE CLAIMS

1-17. (cancelled)

18. (New) A system comprising an arrayed solid surface, said solid surface comprising a plurality of addressable target molecules; and a whole cell solution, wherein said whole cell solution contacts said arrayed solid surface.

19. (New) The system of Claim 18, further comprising a detection apparatus, said detection apparatus configured to detect the presence or absence of an interaction between said target molecules and said whole cell solution.

20. (New) The system of Claim 18, wherein said plurality of target molecules are selected from the group consisting of natural or synthetic oligonucleotides, viruses, polypeptides, antibodies, naturally occurring drugs, synthetic drugs, pollutants, allergens, effector molecules, growth factors, chemokines, nucleic acids, cytokines, and lymphokines.

21. (New) The system of Claim 18, wherein said plurality of target molecules are selected from group consisting of cell initiation molecules, cell differentiation molecules, cell morphogenesis molecules, and cell maintenance molecules.

22. (New) The system of Claim 18, wherein said whole cell solution comprises whole cells selected from the group consisting of endothelial cells, stem cells, basal cells, progenitor cells, hepatocytes, red blood cells, and synthetic cells.

23. (New) The system of Claim 22, wherein said whole cell solution further comprises a cellular product.

24. (New) The system of Claim 23, wherein said cellular product is selected from the

group consisting of lysed cell solutions, subcellular compartment solutions, and subcellular fragment solutions.

25. (New) The system of Claim 23, further comprising a detection apparatus, said detection apparatus configured to detect the presence or absence of an interaction between said target molecules and said cellular product.

26. (New) The system of Claim 18, wherein said solid surface is configured for label free detection.

27. (New) The system of Claim 18, wherein said solid surface is an SPR surface.

28. (New) The system of Claim 18, wherein said solid surface further comprises a plurality of microfluidics channels.

29. (New) The system of Claim 18, wherein said plurality of target molecules comprises at least 2 unique target molecules.

30. (New) The system of Claim 18, wherein said plurality of target molecules comprises at least 50 unique target molecules.

31. (New) The system of Claim 18, wherein said plurality of target molecules comprises between 10 and 10000 unique target molecules.

32. (New) The system of Claim 18, further comprising an instruction manual.